

Translation

PATENT COOPERATION TREATY
PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P-42-457-PCT	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/IB2004/050645	International filing date (day/month/year) 12.05.2004	Priority date (day/month/year) 13.05.2003
International Patent Classification (IPC) or national classification and IPC		
Applicant NAGRAID SA		

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of _____ sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of 1 sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>																								
<p>4. This report contains indications relating to the following items:</p> <table> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/IB2004/050645

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

 - international search (Rule 12.3 and 23.1(b))
 - publication of the international application (Rule 12.4)
 - international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):

the international application as originally filed/furnished

the description:

pages 1-8 as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

the claims:

nos. 5-14 as originally filed/furnished

nos.* _____ as amended (together with any statement) under Article 19 26.02.2005 with letter of 24.02.2005

nos.* 1-4 received by this Authority on _____

nos.* _____ received by this Authority on _____

the drawings:

sheets 1, 2 as originally filed/furnished

sheets* _____ received by this Authority on _____

sheets* _____ received by this Authority on _____

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. The amendments have resulted in the cancellation of:

the description, pages _____

the claims, nos. _____

the drawings, sheets/figs _____

the sequence listing (specify): _____

any table(s) related to sequence listing (specify): _____
4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages _____

the claims, nos. _____

the drawings, sheets/figs _____

the sequence listing (specify): _____

any table(s) related to sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/IB2004/050645

Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-14	YES
	Claims	_____	NO
Inventive step (IS)	Claims	1-14	YES
	Claims	_____	NO
Industrial applicability (IA)	Claims	1-14	YES
	Claims	_____	NO

2. Citations and explanations (Rule 70.7)

Reference is made to the following documents in the present notification:

D1: EP-A-0 786 357 (ROHM CO., LTD) 30 July 1997
(1997-07-30)

D2: US 2002/110955 A1 (PATRICE ET AL.) 15 August 2002 (2002-08-15)

1. **Independent claim 1: novelty**

Document D1, which is considered to be the prior art closest to the subject matter of claim 1, describes (the reference signs between parentheses apply to this document):

A method for assembling at least one electronic component (no. 13, figure 1) comprising substantially planar conductive pads connected to conductive paths (figure 3) arranged on the surface of a generally planar insulating carrier referred to as a substrate (column 6, lines 23-48; no. 11b, 12, figure 1), which method comprises the steps of:
- depositing the substrate (no. 11b, 12) on a working surface in such a way that the side

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with the conductive paths is facing upwards,
- placing the electronic component (no. 13)
in a recess in the substrate (no. 11b, 12,
figure 1) in an area that comprises the
conductive paths, in such a way that the
conductive pads on the component (no. 13)
contact the matching paths on the substrate
(no. 11b, 12, figure 1), and
- depositing a layer of insulating material
(no. 11a, figure 1) in such a way that it
extends both over the component (no. 13) and
over at least one area of the substrate (no.
11b, 12) that surrounds said component (no.
13), such that an electrical connection
between the conductive pads and the
conductive paths is provided by the pressure
exerted by the insulating layer (no. 11a) on
the component.

It follows that the subject matter of claim 1
differs from this known method in that the contact
between the conductive pads of the electronic
component and the conductive paths of the
substrate provides an electrical connection.
Therefore, the subject matter of claim 1 is novel
(PCT Article 33(2)).

2. **Independent claim 1: inventive step**

The problem that the present invention is intended
to solve can thus be considered to be that of
making it possible to provide an electrical

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PCT/IB2004/050645Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

connection between the conductive pads of the electronic component and the conductive paths of the substrate that is not broken in the event of bending of the substrate, meaning that the lifetime of the electrical connection is longer than that of adhered or soldered/welded electrical connections.

The solution to this problem, as proposed in claim 1 of the present application, is considered to involve an inventive step (PCT Article 33(3)), for the following reasons: neither document D1 nor document D2 suggests the technical solution of providing an electrical connection between the conductive pads of a substrate and the conductive pads of an electronic component in such a way that the lifetime of the electrical connection is prolonged even in the event of bending of the substrate.

It follows that the subject matter of claim 1 involves an inventive step (PCT Article 33(3)).

3. Dependent claims

Claims 2 to 14 are dependent on claim 1 and thus also comply, as such, with the requirements of novelty and inventive step of the PCT (PCT Article 33(2) and (3)).